

## **EPA Watershed Initiative 2004**

### **2. Title Page: The Siuslaw Watershed Restoration Initiative**

Siuslaw River Watershed, Oregon HUC 17100206

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### 3. Abstract: (137 words)

The Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians provided our guiding restoration philosophy: **to naturally restore the watershed processes of the Siuslaw watershed.** The dynamics of water, sediment, and organic matter moving from the ridge-tops through the stream system and out the estuary is the focus of this restoration initiative. We propose to implement a whole-basin restoration initiative that improves the health and vitality of water resources by **1) restoring natural landscape processes by repairing 20 culverts and 30 miles of roads, 2) using market incentives to reduce the risk of sediment delivery to stream channels from 10,000 acres, 3) restoring 30 miles of riparian habitats and processes, 4) protecting and restoring a 5-mile estuary corridor, and 5) developing and implementing a water quality monitoring and evaluation program.** We kindly request \$1,295,000 for this initiative.

**4. Work Plan** A. Introduction: The Siuslaw is a 773-square-mile basin located on the mid-Oregon Coast. The river runs 150 miles from the edge of the Willamette Valley to the Pacific Ocean. Half of the watershed is managed by federal agencies, industrial timber companies own a third of the land, and the flat valley bottoms, lower hill slopes, and estuary are in private, non-industrial ownership (Appendix 1). Three distinct geographic areas have been identified: inland valley oak savanna forests and meadows; the Coast Range mountains, one of the best tree-growing areas in the U.S; and the tidally influenced estuary zone. The Siuslaw's stands of old-growth forest represent the largest remaining tracts of intact coastal temperate rain forest on the North Coast of Oregon. The basin once supported huge runs of Pacific salmon, including the largest run of coho south of the Columbia River, which is now at less than 2% of its historical population and listed as threatened under the Endangered Species Act. More timber was removed from the Siuslaw between 1960 and 1990 than from any other area in the world of equivalent size (Sundstrom 1995). Major threats include: the draining, diking, and installation of numerous tidegates in the estuary and valley bottoms which prevent tidal flows in the estuary; aggressive forest practices on steep slopes and in riparian areas have led to an increased risk of sediment delivery to streams; and the river's lead and temperature levels exceed EPA's standards.

Though much of the basin has been altered from its historic condition, our combination of partners and strength of the renowned local leadership provide a unique opportunity to achieve measurable improvements in watershed condition within the 3-year grant period. Since the 1980's, the partners have been working with teams of academic researchers, agency personnel, and community members to develop and implement an integrated ecosystem-based approach to the recovery of the Siuslaw's natural watershed processes (Appendix 2). Eight watershed assessments have been developed for parts of the basin, and a whole-basin assessment was

completed in 2002 (Appendix 3). *An Economic Assessment for the Siuslaw Basin* provided the guidance for our market-based approaches. The work plan outlined here is based directly on the findings and recommendations of these assessments. The whole basin assessment recommended that the following key processes be addressed in restoration: debris flow cycle; organic and sediment storage; water storage; and riparian connection to streams. The short-term watershed restoration goals based on these recommendations are to 1) repair culverts and roads; 2) create large trees and downed wood on steep and unstable slopes above streams; and 3) restore riparian and estuary habitats and processes. The Watershed Council's Draft Action Plan described the long-term goals: 1) provide a framework for basin-wide coordination, cooperation, and citizen involvement to improve and maintain watershed health; 2) promote the protection, conservation, and restoration of fish, forest, timberland, cropland, and water quality and quantity; and 3) contribute to community social and economic stability by supporting local employment. The major threat to the watershed that will be addressed in this initiative is the change in the dynamics of water, sediment, and organic matter from the ridge top to the estuary (landscape process), which is largely influenced by mature trees and downed wood. The listing of the entire Siuslaw basin under 303(d) as impaired for temperature and portions of the basin for sedimentation, habitat modification, and elevated lead levels is indicative of watershed degradation. Activities that led to these threats are: logging and road building on steep slopes and valley floors; floodplain and wetland development; and we believe fishing sinkers are the source of elevated lead levels. In sum, the Siuslaw basin represents the best opportunity to restore salmon and water resources in the Pacific Northwest. We have a clear understanding of the fundamental problem; we have a solid set of partners, including all major stakeholders in the basin; and we have identified the solutions.

B. Proposed Study Projects: Over the past 15 years, restoration partners in the Siuslaw have completed numerous projects, and more are planned for the next three years. These efforts include: road and culvert repair, stream reconnection to floodplain, large wood placed in streams, land title and easement purchases for riparian and estuary protection, community outreach and education, and water quality and habitat analysis and monitoring. Other stream projects proposed for implementation in the next three years will complement our proposed efforts to the EPA. We expect the aggregation of all of these projects to affect health in the entire watershed by restoring natural processes. Thus, EPA funds would join a much larger, basin-wide recovery effort.

**Project 1 Goal:** Restore more natural dynamics of water, sediment and organic matter in the Siuslaw basin by repairing 20 culverts and 30 miles of roads. We are proposing to complete a culvert assessment, prioritization, and implementation project that will compliment on-going road repair and decommissioning and immediately improve the natural dynamics of water, sediment, and organic matter. Culverts were identified in the watershed assessments as one of the most important culprits affecting the dynamics of material in the basin. When they plug or exceed capacity the diverted water and material flow down roads, which then carve new channels down the hillsides. This process generates tremendous additions of sediment to stream channels. The Watershed Council's Technical Team will select culverts to be repaired in high-priority areas (based on the degree of risk of failure, the area's salmon productivity, and cost).

**Tasks:** The Siuslaw National Forest (SNF) is working on an integrated assessment to determine which culverts and roads are priorities for restoration across ownerships. This will be completed by June 2004 and is fully funded at \$94,000 by the SNF. EPA and matching funds would be used to repair the 15 highest-priority culverts (5 per year) at an average cost of \$100,000 each (total cost \$1,500,000). \$500,000 of EPA funds will be leveraged to raise the remaining \$1,000,000

from BLM, Forest Service, Department of Forestry, and the Oregon Watershed Enhancement Board (OWEB). This task is in concert with a road-decommissioning project underway by the SNF. Ten road miles will be decommissioned annually in high-priority areas (total \$200,000). Milestone achievements will be based on the number of culvert replacements and road miles of repair work completed.

**Project 2 Goal: Use market-based approaches to create large trees in 10,000 acres of upland and riparian forests to reduce the risk of sediment delivery to stream channels.** The SNF's

Rehabilitation Stewardship Pilot is a project authorized under the 2003 Federal Stewardship Contracting Authority (Public Law 108-7), which gives the SNF authorities that include provisions for retention of receipts and contracting restoration work to be completed together with timber harvest. By thinning single-story, plantation forests in riparian management areas (300 feet from the stream channel and steep slopes), the Stewardship project will create stands of large trees and return the landscape processes to a more natural condition. Recommendation #13 of the Independent Multi-disciplinary Science Team's report completed for the Oregon Plan for Salmon and Watersheds states: "Retain trees on 'High Risk Slopes' and in likely debris torrent tracks to increase the likelihood that large wood will be transported to streams when landslides and debris torrents occur" (IMST 1999) The Coastal Landscape Analysis Model Study (CLAMS) data show that historically 70% of the Coast Range forest was 80 years old or older but that currently 63% of the trees in the Siuslaw basin are less than 20 inches in diameter at breast height (DBH) and 45% are less than 10 inches DBH. An 80-year-old tree in the Siuslaw is considerably larger than 20 inches DBH, even on the worst growing sites, and is more likely to be larger than 50 inches DBH. Forest thinning in riparian and steep and unstable slopes will lead to more rapid growth of large trees, thereby increasing the amounts of large wood transported to

streams in debris torrents or flows. The Stewardship project allows only those logging practices that will not accelerate erosion or increase sedimentation of stream channels and focuses on the treatment of whole corridors to improve conditions on both federal and private lands. Tasks:

Create market incentives for forest management practices that produce stands of large trees while providing incentives for local economic development. We propose to work with the Siuslaw Stewardship Group, a citizen group collaborating with the SNF on the Stewardship project, to connect the Stewardship Fund to local economic development. The recently completed *Economic Assessment* provides the basis for a number of economic development opportunities tied to the production of wood from Federal lands. The Stewardship project creates a fund based on the timber harvest receipts. Though new, this Stewardship Fund holds over \$400,000, which will be reinvested in local economic and ecological restoration projects. With EPA and matching funds from the Stewardship Fund, we will take the next step following the *Economic Assessment* and identify entrepreneurs interested in developing new or expanding existing forest products businesses that are compatible with watershed recovery. Examples from the *Economic Assessment* include a native plant nursery, secondary wood products manufacturing, such as cabinets and trusses, and wooden boat building. Five to ten business plans will be developed for entrepreneurs who link their businesses to forest products or services derived from watershed restoration. More than 3,000 acres will be thinned in the Siuslaw each year for a total of 10,000-forested acres restored during the project period. The identification of entrepreneurs will happen in Year 1 (\$50,000). Business plans will be developed in Year 2 (\$50,000). Viable businesses that are successful in attracting entrepreneurial leadership and capital will be launched in Years 2 and 3. Experts in community economic development will provide technical support to the entrepreneurs in Years 2 and 3 (\$80,000). Partnering with Ecotrust's Market Connections

Initiative (MCI), ([www.ecotrust.org/forestry/mktconn](http://www.ecotrust.org/forestry/mktconn)), we will connect wood products from forest thinning in Years 2 and 3 to the green building market in Portland and Eugene (largest cities in the Siuslaw woodshed). This will create an incentive for the Stewardship project to expand its forest thinning program and accelerate the recovery of late successional forest characteristics (large trees) and the restoration and protection of water resources. Ecotrust, Shorebank Pacific, and Shorebank Enterprise Pacific (SEP) ([www.sbpac.com](http://www.sbpac.com)) are experienced at developing entrepreneurial capacity and will lead these efforts (Appendix 2). The demand for wood from well-managed forests has grown significantly in the last five years, and there is insufficient local supply to meet this demand. Nationally, 20% of all public buildings and 3% of commercial buildings have received certification through the US Green Building Council's Leadership in Energy and Environmental Design (LEED) program. LEED is a rating system for buildings that evaluates performance on site selection, energy efficiency, water conservation, indoor air quality, and the use of recycled and reclaimed materials and wood from well-managed forests. There are more than 60 buildings in Portland that are working toward this certification. The MCI will help Siuslaw wood products businesses connect to this growing market. The number of forested acres restored, number of entrepreneurs identified, number of viable business plans developed, and the number of sustainable businesses created will serve as our indicators of success.

**Project 3 Goal: Restore 30 miles of riparian habitats and processes.** Riparian vegetation is an important factor controlling the dynamics of water, sediment and organic matter in streams. The entire Siuslaw basin is listed under 303(d) as impaired for temperature, and, in addition to other important contributions to healthy watershed dynamics, riparian vegetation is one of the major factors that affect the temperature regime. Tasks: Provide native plants and training for



volunteers and landowners to plant and monitor trees in riparian areas. Building on the Watershed Council's 3-year-old tree planting program and focusing on priority areas identified by the Technical Team, volunteers and staff will plant native trees in riparian areas covering one side of 15-20 stream miles per year throughout the basin for a total of both sides of 30 stream miles of riparian area restored over the grant period. A variety of native trees will be planted, and on some relatively open sites we expect the plants to grow at an average of 15 inches per year due to the high productivity of the area. We anticipate that within 10 years and aggregated with Projects 1 and 2, these newly planted riparian areas will benefit from a significant increase in shade and a corresponding reduction in stream temperature. Over 15,000 trees have been planted through this program, and we will quadruple this amount with \$10,000 per year from the EPA and \$60,000 in matching funds. Match will come from industry and state programs and from volunteer labor. All activities will coordinate with our proposed monitoring program (Project 5) and with the Department of Environmental Quality's (DEQ) studies. Our milestones will be reduction in stream temperature, numbers of trees planted and protected, and miles and acres of riparian areas restored.

**Project 4 Goal:** Protect and restore 5 miles of estuary habitats and processes. The whole-basin assessment identified the estuary as one of the most critical areas in need of restoration. It reports that 58% of the tidal marsh habitat has been destroyed. Three quarters of this habitat is along the main stem of the Siuslaw and the remaining quarter is at the mouth of the North Fork. Our project will result in the restoration of one third of the estuary habitat on the mainstem and one quarter of the total tidal marsh in the Siuslaw basin. Tasks: Purchase conservation easements on two river miles, remove tide gates and dikes, and recover over 600 acres of tidal marsh in the lower Siuslaw estuary. Many partnering organizations have been working on restoration and

protection projects in the estuary, and with EPA funds our project would complete a 5-mile restored corridor in the estuary. Three of the 15 miles on the mainstem Siuslaw have been protected through conservation easements and acquisition, leaving a 2-mile stretch near the mouth owned by landowners who have expressed an interest in conservation easements or sale of their land. The 600 acres of surrounding estuary habitat will be restored by removing tide gates and dikes and will be funded through NRCS, OWEB, and USFWS. \$435,000 of EPA funds will be matched with these funds and additional funds from OWEB and private foundations (total match \$495,000) for the purchase of conservation easements, estuary restoration, and the exploration of wetland and habitat banking opportunities to restore and protect additional estuarine habitat in perpetuity. Estuary restoration will be completed by the end of the grant period. The area of tidally influenced estuary will increase immediately, which will trigger an immediate growth of wetland vegetation and storage and processing of organic material. Measurable improvements to water quality will be achieved within the 3-year grant period, and significant improvements to estuary habitat and function will be achieved within 5 years. Milestones that will determine the progress of this project include the number of stream miles protected and the numbers of acres of estuary restored.

**Project 5 Goal: Develop and implement a whole-basin water quality monitoring and evaluation project that tracks watershed restoration progress across ownership, coordinates public and private efforts, and leads to improved water quality.** A variety of federal and grass roots monitoring and evaluation efforts exist in the Siuslaw basin, but these efforts are not coordinated at the watershed level. **Tasks: Hire a monitoring and evaluation coordinator to build on and integrate the technically sound work of the Watershed Council, Tribes, Forest Service, BLM, DEQ, and private agencies.** The Technical Team will direct a multi-group team to monitor and

evaluate water quality and indicator species based on accepted, measurable performance standards. Particular attention will be paid to lead levels in the basin's waterways, which have been found to frequently and significantly exceed EPA's acute toxicity level. Our project will determine if fishing sinkers are the major source of lead, which is not naturally found in the river but is a serious problem along many coastal streams. We will analyze the long-term trends in lead concentrations in the annual rings of *Margaritifera sp.* shells by measuring the lead/calcium ratios using Laser Ablation ICPMS techniques. This will help determine if fishing sinkers are the primary cause of lead pollution in the water. The Watershed Council's study has documented significant shell degradation with little ability of the mussels to repair damage. We will compile data for all environmental performance measures into a shared database. This program builds on more than a decade of monitoring projects that have produced a vast amount of valuable data. We will coordinate monitoring efforts with the DEQ's programs and protocols. With \$150,000 of EPA and \$50,000 in matching funds, we will make this data publicly available while providing a credible, long-term, whole-basin monitoring effort.

C. Project Management: The Siuslaw Watershed Council (SWC), Soil and Water Conservation District (SWCD), Siuslaw Institute (SI), National Forest (SNF), Pacific Coast Watershed Partnership (PCWP) and Ecotrust will manage the projects. Ecotrust will be the grantee. Adam Lane, Ecotrust's CFO, will provide fiscal oversight for the projects. Adam and his team have more than ten years of experience managing multiple, multi-year, million-dollar projects. Project managers from partner organizations are Dave Eisler (SWC), Johnny Sundstrom (SI), Eric Nusbaum (SWCD), Karen Bennett (SNF), and Brent Davies (Ecotrust/PCWP). Dave Eisler, Chair of the SWC, has served on the Board since 1999. He has a Doctorate degree in anthropology, owns and manages a 70-acre forest, and has decades of experience organizing all

aspects of community environmental projects. Johnny Sundstrom, Director and Chair of the Siuslaw SWCD, and President of Oregon's Association SWCDs, is also the Founder and Coordinator of the Siuslaw Institute. The Institute is a public benefit organization that works on restoration, education, and outreach. Johnny has managed dozens of restoration projects and was the lead author for the *Economic Development Assessment for the Siuslaw Basin*. Eric Nusbaum, the SWCD's Administrator, manages more than a dozen contracts per year with budgets that total more than \$500,000. Karen Bennett, Watershed Program Manager for the SNF since 1995, manages operations including: watershed assessments, water quality and quantity monitoring and analysis, protection and restoration, and project design and implementation. Brent Davies, Director of Ecotrust's Community and Public Forestry and Coordinator of the PCWP, has worked on designing, planning, and implementing watershed restoration, protection, and education projects for the past six years in the Pacific Northwest.

D. Outreach Activities: The community-based groups will lead community outreach activities. Primary activities include outreach to landowners in priority areas for restoration. The outreach team will work with landowners to develop trusted relationships and explore landowner interest in conservation and restoration programs. The team will also continue their work with the local school districts and hundreds of volunteers to educate and involve watershed citizens in this initiative's integrated, ecosystem-based approaches to restoration. They will hold monthly community meetings for residents to ask and have answered questions and concerns about ecological and economic restoration projects and lead tours of proposed, active, and completed projects. The outreach team will write a quarterly article for Tidepool, a daily, on-line news service ([www.tidepool.org](http://www.tidepool.org)) describing the progress and findings from this initiative. Multi-media documentation and outreach products will be a part of the ongoing work of this initiative.

## **Appendix 1: Landowner Map 1.3 from Siuslaw Watershed Assessment**

## **Appendix 2: Partners Description and Details**

The partners in the Siuslaw watershed have a long history of developing integrated ecosystem-based approaches to aquatic conservation. The partnership restoration efforts of the Siuslaw Watershed Council (SWC), the National Forest (SNF), the Soil and Water Conservation District (SWCD), and the Siuslaw Institute (SI) have received national and international recognition. In 2003, the SNF received three national, internal awards, including one from the Chief of the Forest Service, for its leadership and outstanding work on and off Forest Service lands. Together, the four organizations' partnership efforts earned them international recognition in 2003 by being selected as one of five finalists for the Nobel-like Thiess International Riverprize, which recognizes excellence in river management and restoration.

Ecotrust, a bioregional conservation group, has worked with the partners for several years on projects including the production of the Siuslaw Watershed Assessment (2002) and the identification of salmon anchor habitats. The Pacific Coast Watershed Partnership (PCWP), which Ecotrust is currently coordinating, is a public-private partnership of organizations sponsored by the USDA Forest Service working on the recovery of watershed processes from the Canadian to the Californian border ([www.PacificWatersheds.net](http://www.PacificWatersheds.net)). In FY 2003, the PCWP selected the Siuslaw as the priority watershed in which to focus the majority of its efforts. The Siuslaw was selected because of the solid, community-based partnership and the cutting edge watershed restoration work that has taken place in the Siuslaw for decades. The PCWP's objective is to provide coordination, support and technical assistance for community-based watershed protection and restoration efforts, so that the vision of a restored Siuslaw, where ecological and economic integrity are balanced and protected, is realized within the next five years.

All partners are committed to making the Siuslaw Watershed Restoration Initiative a project that demonstrates the ability of a diverse partnership to accelerate the recovery of watershed processes and water resources. **The Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians are key members of the Watershed Council, and they provide the partnership with a guiding restoration goal: to naturally restore the watershed processes of the Siuslaw watershed.** This philosophy supports both passive and active restoration methods, provided they mimic or restore the natural landscape processes that have been disrupted.

Ecotrust, Shorebank Pacific, and Shorebank Enterprise Pacific (SEP) ([www.sbpac.com](http://www.sbpac.com)) are experienced at developing entrepreneurial capacity and will the market-based approaches to watershed restoration. Shorebank Pacific is a regular commercial bank, and SEP is a nonprofit enterprise assistance organization. These partners have made over \$30 million in loans to 100 businesses in the coastal communities of Oregon and Washington in the past 5 years. Their clients include forest managers, non-timber forest products harvesters, flooring manufacturers, mills and wood distributors.

Other partners working in the Siuslaw basin include the following: Bureau of Land Management, Oregon Departments of Agriculture, Fish and Wildlife, Forestry, and Environmental Quality, Lane County, Bonneville Power Administration, Many Rivers (formerly McKenzie River) Land Trust, University of Oregon, Siuslaw and Mapleton School Districts, Natural Resources Conservation Service, Salmon Trout Enhancement Program, Ducks Unlimited, Oregon State University, many private landowners, Pacific Northwest Research Station, Oregon Watershed Enhancement Board, Cascade Pacific Resource Conservation and Development District, US Fish and Wildlife Service, The Nature Conservancy, Pacific Rivers

Council, Roseburg Forest Products, Davidson Industries, Weyerhaeuser, and US Geological Service.

**See attached letters of support** from the Siuslaw Watershed Council, Siuslaw Soil and Water Conservation District, Siuslaw Institute of Watershed Arts and Sciences, Siuslaw National Forest, and the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians.



### **Appendix 3: List of watershed assessments completed for all or parts of the Siuslaw basin**

*An Economic Assessment of the Siuslaw Basin*, Siuslaw Institute, Inc. 2003. Deadwood, OR.

Siuslaw Watershed Council. 2002. *A Watershed Assessment for the Siuslaw Basin*.

(<http://www.inforain.org/siuslaw>)

USDA Forest Service. 1996. *Indian/ Deadwood Watershed Analysis*. Siuslaw National Forest.

Mapleton Ranger District, Florence, OR

USDA Forest Service. 1998. *Lower Siuslaw Watershed Assessment*. Siuslaw National Forest.

Mapleton Ranger District, Florence, OR

USDI. 1995. *Lake Creek Watershed Analysis*. BLM, Eugene District.

USDI. 1995. *Watershed Analysis of Wolf Creek Watershed*. BLM, Eugene District

USDI. 1996. *Siuslaw Watershed Analysis*. BLM, Eugene, District (Upper Siuslaw Basin)

USDI. 1999. *Wildcat Creek Watershed Analysis*. BLM, Eugene District

Weyerhaeuser. 1996. *Upper Siuslaw Watershed Analysis*. Eugene, OR

Dewberry, T.C. 1996. *Can We Diagnose the Health of Ecosystems?* Northwest Science &

Photography, Florence, OR.

#### **Appendix 4. Literature Cited**

Coastal Landscape Analysis and Modeling Study ([www.fsl.orst.edu/clams](http://www.fsl.orst.edu/clams))

Independent Multi-disciplinary Science Team. Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Act Rules and the measures in the Oregon Plan for Salmon and Watersheds. Technical Report 1999-1. To the Oregon Plan for Salmon and Watersheds, Governor's Natural Resources Office, Salem, Oregon.

Sundstrom, Johnny. 1995. Sustainable Rural Communities. Data compiled from USDA Forest Service timber sale records 1960-1990, Mapleton Ranger District. Siuslaw Institute, Inc. Deadwood, OR.

**Table 1. BUDGET INFORMATION -EPA Watershed Initiative Grant Program<sup>1</sup>**  
**Siuslaw Watershed Restoration Initiative**

<b>Watershed Project, Activity, or Work Plan Element</b>	<b>EPA</b>	<b>Federal</b>	<b>Non Federal</b>	<b>Total</b>
Project 1: 20 Culverts Repaired	\$500,000	\$1,094,000	\$600,000	\$2,194,000
Project 2: Market Incentives to reduce sediment	\$180,000		\$60,000	\$240,000
Project 3: Restore 30 miles of riparian habitats and processes	\$30,000		\$60,000	\$90,000
Project 4: Protect and restore 5-mile estuary corridor	\$435,000	\$115,000	\$380,000	\$930,000
Project 5: Develop and implement monitoring & evaluation program	\$150,000	\$30,000	\$20,000	\$200,000
	<b>\$1,295,000</b>	<b>\$1,239,000</b>	<b>\$1,120,000</b>	<b>\$3,654,000</b>

**SECTION B - BUDGET CATEGORIES**

<b>Budget Categories</b>	<b>Watershed Project, Activity or Work Plan Element</b>					<b>TOTAL</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
	<b>Culverts</b>	<b>Markets</b>	<b>Riparian</b>	<b>Estuary</b>	<b>Monitor&amp; Eval</b>	
a. Personnel		\$83,200		\$69,000	\$10,000	<b>\$162,200</b>
b. Fringe Benefits		\$20,800	\$0	\$17,250	\$2,500	<b>\$40,550</b>
c. Travel		\$1,700		\$2,500	\$1,000	<b>\$5,200</b>
d. Equipment						
e. Supplies						
f. Contractual*	\$500,000	\$55,000	\$30,000	\$300,000	\$120,000	<b>\$1,005,000</b>
g. Construction						
h. Other						
i. Total Direct Charges (sum line a-h)	\$500,000	\$160,700	\$30,000	\$388,750	\$133,500	<b>\$1,212,950</b>
j. Indirect Charges		\$19,284		\$46,650	\$16,020	<b>\$81,954</b>
<b>TOTALS (sum line i-j)</b>	<b>\$500,000</b>	<b>\$179,984</b>	<b>\$30,000</b>	<b>\$435,400</b>	<b>\$149,520</b>	<b>\$1,294,904</b>

\*Contractors include: Siuslaw Watershed Council; Siuslaw Inst;  
Siuslaw Soil and Water Conservation District; Shorebank Enterprise

<sup>1</sup> Excerpted from Standard Form 424A OMB Circular A-102, with additional column inserted to specify EPA request.